

DETAILED ACTION

Information Disclosure Statement

1. The information disclosure statements (IDS) submitted on 05/27/05 and 12/28/05 are in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statements are being considered by examiner.

Claim Objections

2. Claims 4, 14 and 24 are objected to because the specification is lack of disclosure for the limitation of "perceptual and subjective features" that enables one skilled in the art to fully understand the claimed limitation. For examination purpose, the claimed limitation is treated as one of the calculated features described in the specification, such as "mel-frequency cepstral coefficients".

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:
- The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
4. Claims 15 and 25 rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.
5. Claims 15 and 25 recites the limitation "the training calculation" in line 2 of both claim(s). There is insufficient antecedent basis for this limitation in the claim(s).

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

7. Claims 1-25 are rejected under 35 U.S.C. 102(e) as being anticipated by Logan et al. (US 6,633,845 B1).

8. In Re claims 1, 11 and 21, with reference to Figures 2-4, Logan discloses a music summarization system and method (Abstract) comprising:

- A feature extractor (204) for receiving audio data (210) and directly analyzing the audio data to identify a representation of the audio data having at least one calculated feature characteristic of the audio data (302; Column 2, Lines 11-22);
- A classifier (206) in communication with the feature extractor for classifying the audio data on the basis of the representation received from the feature extractor into a category selected from at least two categories (306; Column 2, Lines 22-24);
- A summarizer (208) in communication with the classifier for generating an acoustic signal (214, 308, 310) representative of a summarization of the

digital audio data, wherein the summarization is dependent on the category selected by the classifier (Column 2, Lines 22-29).

9. In Re claims 2, 12 and 22, with reference to Figure 2, Logan discloses a segmentor (202) in communication with the feature extractor for receiving an audio file and segmenting audio data into segment frames, and overlapping the frames for the feature extractor (Column 3, Lines 67-68; Column 4, Lines 1-12).

10. In Re claims 3, 5, 13, 15, 23 and 25, with reference to Figures 2 and 6, Logan discloses:

- a classification parameter generator (206) in communication with the classifier (206) (Column 8, Lines 4-9), wherein:
 - i. The classifier classifies each of the frames into a category by collecting training data from each frame (610; Column 8, Lines 15-29 and 56-63); and
 - ii. Determining classification parameters by using a training calculation (HMM) in the classification parameter generator (206) (604; Column 8, Lines 9-14 and 44-47).

11. In Re claims 6, 7, 16 and 17, with reference to Figures 2 and 3, Logan discloses the acoustic signal (214, 308, 310; Column 2, Lines 11-16) is vocal music or pure music (Claims 2, 20, 26 and 28).

12. In Re claims 4, 8, 10, 14, 18, 20 and 24, Logan discloses the calculated feature is mel-frequency cepstral coefficients (Abstract; Column 2, Lines 17-22; Column 4, Lines 16-37; Claim 5).

13. In Re claims 9 and 19, with reference to Figures 2 and 4, Logan discloses the summarizer (208) generates the summarization (214) in terms of clustered results and heuristic rules related to pure or vocal music (Column 5, Lines 1-12; Column 6, Lines 63-67; Column 7, Lines 34-39).

Conclusion

14. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Hidaka et al. and Zhang are further cited to show related teachings in the art.

15. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kawing Chan whose telephone number is (571)270-3909. The examiner can normally be reached on Mon-Fri 9am-4pm.

16. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lincoln Donovan can be reached on 571-272-1988. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

17. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a

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USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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